

AMENDMENTS TO THE CLAIMS

Please cancel Claim 2 and amend Claims 1, 3 and 8 as follows.

LISTING OF CLAIMS

1. (currently amended) A controlled atmosphere furnace comprising
a conveyor device for continuously transporting articles to be brazed, each
of the articles being coated with a flux;
a preheating chamber for preheating the article and a brazing chamber for
brazing the article, and
an atmosphere shutter chamber disposed forward and rearward of the
brazing chamber for preventing atmospheric gas in the brazing chamber from flowing
out, wherein
the article conveyed through the preheating chamber is quickly preheated
by the combustion gas, circulating the preheating chamber in a closed-loop flow path,
close to a predetermined temperature and within a predetermined time[[.]] ; and
a gas burner and a circulation fan are provided in the closed-loop flow
path for the combustion gas.
2. (cancelled)
3. (currently amended) A controlled atmosphere furnace as defined by claim
[[2]] 1, wherein the quick heating is carried out by controlling the gas burner and the
circulation fan.

4. (original) A controlled atmosphere furnace as defined by claim 1, wherein a speed of the conveyor device is controlled so that the article passes through the preheating chamber within a predetermined time.

5. (original) A controlled atmosphere furnace as defined by claim 1, wherein the atmosphere shutter chamber has a plurality of metallic curtains.

6. (original) A controlled atmosphere furnace as defined by claim 1, wherein the predetermined time is approximately five minutes in view of the deterioration degree of flux in the atmosphere and the growth of oxide layer on the article, and the predetermined temperature is approximately 450°C.

7. (original) A controlled atmosphere furnace as defined by claim 1, wherein a tip nozzle of a circulation duct defining the closed-loop flow path for circulating the combustion gas opens to a portion of the article required to be heated.

8. (currently amended) A method for heating a controlled atmosphere furnace used for preheating articles to be brazed, which are continuously supplied to the atmospheric furnace, prior to being brazed, wherein

the article is coated with a flux and is quickly preheated to a predetermined temperature, with forcibly circulated combustion gas, within a predetermined time determined in view of the deterioration degree of brazing flux in the atmosphere and the growth of oxide layer on the article.

9. (original) A method for heating a controlled atmosphere furnace as defined by claim 8, wherein the predetermined time is approximately five minutes and the predetermined temperature is approximately 450°C.